



Protect & Restore Stands Guard for the Scandinavian Medical Center

PARAGON Software in action



Paragon Protect & Restore

Paragon's data backup solution Protect & Restore safeguards the IT infrastructure of a major medical center.

Customer:

Industry: medical care, healthcare, wellness, medical treatment, prevention, clinic, hospital

The Scandinavian Medical Center (SMC) is a multidisciplinary healthcare institution for adults 18 years and above. The SMC implements the concept of a health management institution with a full cycle of medical services ranging from diagnosis, treatment (including surgical procedures), follow-up care to preventive measures. Like any medical facility, the SMC pays close attention to the integrity and safekeeping of patient records, prescribed courses of treatment and results, as well as the reliable protection of the entire IT infrastructure hosting such records. In case of a disaster, the center needs to get up and running immediately, without delay. [Learn more about the center at: http://www.scz.ru/](http://www.scz.ru/).

The challenge:

The SMC's hybrid IT infrastructure consists of 55 percent physical and 45 percent virtual machines (VMs) on MS Hyper-V. Nine VMs run an MS-Navision-based financial analytics server, Microsoft Exchange, Active Directory, DFS file cluster, with other applications enclosing confidential electronic medical records of patients, as well as Microsoft SQL Server. Physical machines run PACS archive with medical data, MS System Center, including Microsoft Exchange and Active Directory mirrors and other applications.

Before deploying Paragon Protect & Restore (PPR), the SMC used Windows NT backup with a limited set of functions, so administrators began to look for a solution with more capabilities and more stable performance.

They needed an efficient solution to fulfill data management tasks and restore data in case of emergency, as well as a solution that would effectively unfold the state of the entire system from a backup.

»We were searching for a single solution to monitor and manage the backup operation for all physical and virtual servers within the clinic's hybrid IT infrastructure from a single-point console.« *explained Alexander Kolenchenko, Head of Network Administration and Telecommunications at the Scandinavian Medical Center.* **»One of the major requirements was to meet service level agreements (SLAs) to make sure the system will not fail and, in case of a disaster, restore data necessary to conduct current consultations within an hour and a half, each next hour of downtime costing the SMC USD20,000. We also wanted to be able to perform incremental backups and to recover MS Exchange data on the level of separate users' mailboxes without purchasing additional modules.«**

staff, along with the security and simplicity of centralized management, all at the most affordable market price, and with a competent technical support team available at all times.

The major set of outlined tasks and expectations associated with the purchased product:

1. Scheduled server backup;
2. Backup of servers for active SQL, DB2 (IBM Lotus Domino) databases;
3. Exchange server backup;
4. Sharepoint server backup;
5. Space-saving and productive system;
6. Sparingly use storage space taken up by backup copies, bearing in mind the infrastructure is fairly large;
7. File-level restore without restoring the entire archive;
8. Restoring backed up data on a new physical machine if the existing server equipment has crashed beyond repair.

The environment:

The SMC has more than 100 medical specialists in 39 fields treating more than 50,000 patients each year and employs 220 physical workstations. Apart from the Hyper-V cluster made up of 3 virtualization hosts securing the performance of eleven virtual machines, the SMC runs eight physical servers.

The solution:

Paragon Protect & Restore Windows Server and Paragon Protect & Restore Hyper-V

The benefits:

PPR delivers fast and reliable computing to the SMC

The solution:

With the qualified support of the Paragon Software experts, the optimal solutions were chosen to service the entire infrastructure of the SMC, namely Paragon Protect & Restore Windows Server and Paragon Protect & Restore Hyper-V. These versions comprise the following features to address the SMC's needs:

- Real-time monitoring & reporting.
- All-around protection of physical and virtual environments.
- Through a centralized management console, all operations are easily conducted from a single interface.
- High-speed performance for creating backup copies and recovering data.

- Full visibility for proactive issue resolution to meet SLAs.
- Update of all infrastructure components that requires no rebooting and does not interfere with the operation of a key database (the so-called “hot backup”).
- Incremental backup eliminates the need to greatly compress backed up data.
- The solution’s high scalability makes it easy to adapt to business growth.
- A special recovery procedure for individual MS Exchange mailboxes provides safety. The recovery operation does not affect available messages at all, and targets only missing email items.
- Selective recovery methods allow administrators to browse the existing backups and specify the exact files and folders that need to be restored.
- Direct data recovery on dissimilar hardware without the need to reboot the operating system and applications and to reconfigure the system.
- Multi-tier backup storages and an exclusive method of data deduplication.
- A flexible strategy of data storage helps to effectively manage the lifetime of recovery points and to control the scope of space available in backup storages.
- A significant reduction in over-allocation of resources and capital costs. PPR allows the use of all benefits (hybrid infrastructure, software-defined storage) of a network storage system including network-attached storages (NAS), SAN, local HDD (internal or USB), share, and/or disk pool.
- Paragon’s UFSD (Universal File System Driver) Technology allows the SMC to work with all major file systems.

According to Alexander Kolenchenko, »it is one of the essential program’s advantages it offers centralized management: in one console, PPR combines the simultaneous management of heterogeneous physical and virtual environments.

The system’s flexibility is a strong positive feature that allows users to assign different backup tasks for different infrastructure items and use traditional data protection methods for highly valuable information as well as incremental backup scenarios for less vulnerable data. PPR’s modular architecture provides excellent scalability as the number of workstations in the clinic grows. PPR includes intelligent monitoring through the management console, which allows us to now view real-time statistics on all operations, filter errors, warnings, and changes in the infrastructure.«

Result:

Paragon Protect & Restore guards the failure-free operation of all crucial systems and applications employed by the Scandinavian Medical Center and allows them to minimize the risks of irreparable loss of patient data including diagnosed diseases, methods of treatment, and history of illness. Due to PPR, the Center is now able to regularly have:

1. Routine scheduled backup;
2. Recovery of corrupted, erased, and accidentally deleted files on a server (granular recovery);
3. Recovery of Microsoft Exchange letters based on incremental backup technology;
4. Monitoring and reporting in the System Center (PPR provides a single management console for intelligent monitoring and reporting to keep the medical center's systems running smoothly, receive statistics on all operations, and filter errors, warnings, or other information about infrastructure's processes).



»It is one of the strong advantages of Paragon Protect & Restore that there is a local technical support team at hand, always connected with the customer and willing to help them out of any difficulty,«

concludes Alexander Kolenchenko.

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